

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : NAPARSTEK, Yaakov
Serial No. : 09/826,069
Filed : April 4, 2001
For : PEPTIDES FOR THE TREATMENT OF
: SYSTEMIC LUPUS ERYTHEMATOSUS
: AND METHODS OF TREATING
: SYSTEMIC LUPUS ERYTHEMATOSUS
:
: Group Art Unit 1644
: Examiner: G. EWOLDT

Hon. Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, VA 22313-1450

June 30, 2008

DECLARATION UNDER 37 CFR SEC 1.132

I, the undersigned, Yaakov Naparstek, of 17 Davidson St., Jerusalem, Israel, hereby declare as follows:

Background Information

1. I obtained an MD degree in 1973, from the Hadassah-Hebrew University Medical School in Jerusalem, Israel.
2. I am employed at Hadassah University Hospital, Jerusalem, Israel, as Chairman of Medicine and as Professor of Medicine at the Hebrew University – Hadassah School of Medicine, Jerusalem, Israel.
3. I am Board certified in Internal Medicine, Rheumatology and Clinical Immunology and Allergy.
4. I have been a research fellow and a visiting Professor at the Weizmann Institute of Science, Rehovot, Tuft's University, Boston, The National Institute

of Health, Bethesda and Stanford University, Stanford. I now serve as the Director of the Hadassah Clinical Immunology and Rheumatology Center.

5. I am also the incumbent of the Leiferman Chair in Rheumatology.

6. My main research interests are in the field of autoimmunity, SLE and autoimmune arthritis. In recent years, my research group has focused on the identification of the target antigens in SLE and in autoimmune arthritis and in the attempts to develop antigen-specific therapeutic modalities to those diseases.

7. I am the recipient of national and international awards, and the author of about 100 publications and chapters in books as well as many patents in the field of autoimmune inflammatory diseases.

8. Under my direction and control the following trials were undertaken, which has been approved by the Internal Review Board (Helsinki) and by the Israeli Ministry of Health:

Phase I/II Clinical Trial with Lupusorb™ Immunoabsorption Columns in Systemic Lupus Erythematosus (SLE or lupus) patients

Ten additional SLE patients were recruited for treatment with a single Lupusorb™ immunoabsorption session during routine plasmapheresis procedure. The Lupusorb™ immunoabsorption column is an affinity adsorption column comprising R38 (VRT101) peptide. Patient screening prior to enrollment into the study was between 4 weeks up to 7 days prior to the day planned for plasmapheresis. Patients were enrolled into the study on the plasmapheresis day and underwent treatment of between 2-3 hours with the Lupusorb™ column. The patients were then followed up for 8 weeks after the Lupusorb™ column procedure. Patients continued on any drug regimen that had been in place prior to the trial, but no drugs such as cyclophosphamide were administered to combat a potential rebound effect. No rebound effect was observed.

Figures 1-10 document the findings in each of the ten patients. In most patients, anti-R38 antibodies declined immediately after treatment, and remained low at visit 4, four weeks post-treatment. In the 3 patients shown in Figures 3, 4 and 6, anti-R38 antibody levels were not reduced by the treatment.

Figure 11 is a summary chart of the findings in all 10 patients. Mean anti-VRT values, including p values ($p=0.009$ for visit 1 and 3), are reported in the chart.

9. I declare that all the statements made herein of my own knowledge are true, and that all statements made on information and knowledge are believed to be true, and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Signed this 29 day of July 2008.



Yaakov Naparstek

Figure 1

Patient #002

Anti- VRT - Serum

Visit #	Date Sample Received	Test Date	OD 405		Average
			Duplicate 1	Duplicate 2	
Visit 1 (Pre)	6.3.07	7.3.07	0.87	0.779	0.88
Visit 1 (post)	6.3.07	7.3.07	0.627	0.611	0.62
Visit 2	20.3.07	26.3.07	0.174	0.183	0.15
Visit 3	25.3.07	26.3.07	0.19	0.197	0.16
Visit 4	10.4.07	13.4.07	0.403	0.416	0.408
Visit 5	3.5.07	9.5.07	1.389	1.411	1.4

Anti VRT-101 Antibody Level of Patient S.G.G, #002

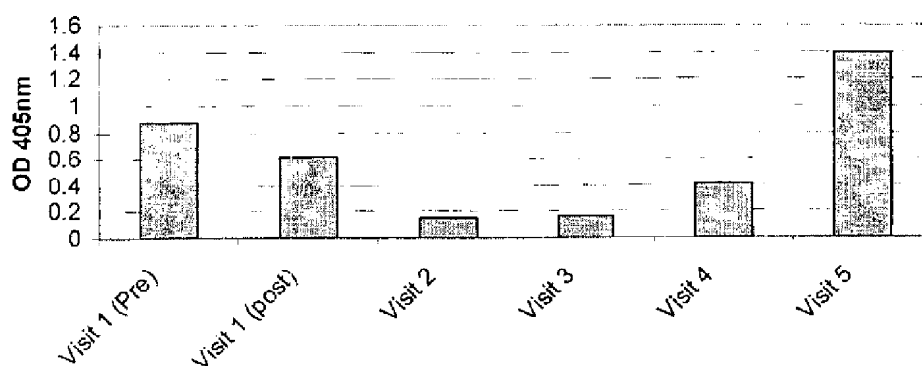


Figure 2

Patient #003

Anti- VRT - Serum

Visit #	Date Sample Received	Test Date	OD 405		Average
			Duplicate 1	Duplicate 2	
Visit 1 (Pre)	21.5.07	21.5.07	1.816	1.696	1.756
Visit 1 (post)	21.5.07	21.5.07	1.939	1.792	1.8655
Visit 2	7.6.07	14.6.07	1.151	0.843	0.997
Visit 3	14.6.07	14.6.07	1.111	1.253	1.182
Visit 4	20.6.07	21.6.07	1.167	1.233	1.2
Visit 5	17.7.07	18.7.07	0.823	0.826	0.8245

Anti VRT-101 Antibody Level of Patient M.S.Z, #003

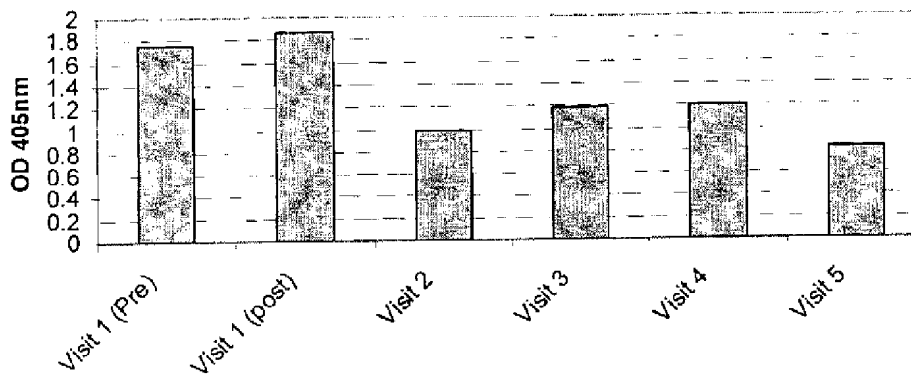


Figure 3

Patient #013					
Anti- VRT - Serum					
Visit #	Date Sample Received	Test Date	OD.405		Average
			Duplicate 1	Duplicate 2	
Visit 1 (Pre)	31.10.07	4.6.11.07	1.075	1.135	1.105
Visit 1 (post)	31.10.07	4.6.11.07	0.809	0.826	0.8175
Visit 2	15.11.07	19.11.07	1.251	1.329	1.29
Visit 3	22.11.07	26.11.07	1.231	1.01	1.1205
Visit 4	29.11.07	3.12.07	1.72	2.077	1.8985
Visit 5	27.12.07	31.12.07	1.285	1.294	1.2895

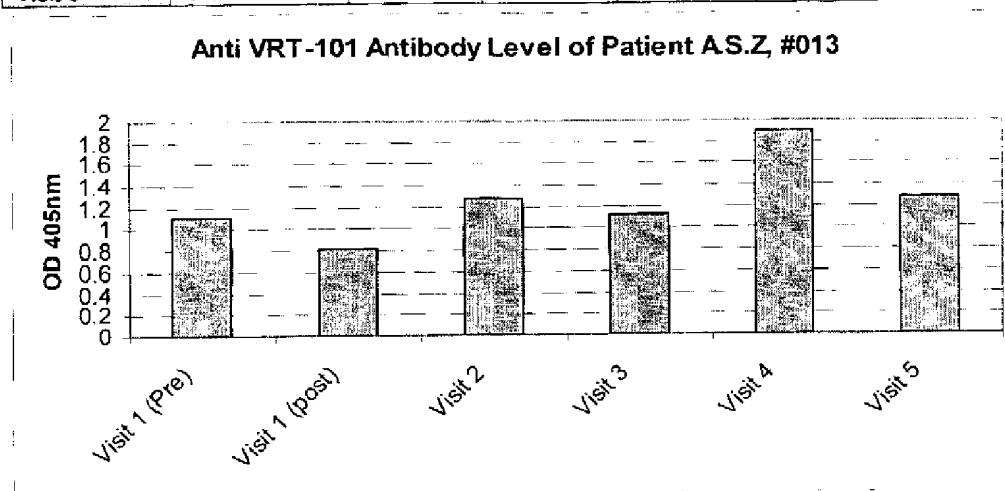


Figure 4

Patient #014

Anti- VRT - Serum

Visit #	Date Sample Received	Test Date	OD 405		Average
			Duplicate 1	Duplicate 2	
Visit 1 (Pre)	29.11.07	3.12.07	0.491	0.678	0.5845
Visit 1 (post)	29.11.07	3.12.07	0.42	0.365	0.3925
Visit 2	11.12.07	13.12.07	0.559	0.662	0.6105
Visit 3	17.12.07	19.12.07	0.622	0.571	0.5965
Visit 4	25.12.07	31.12.07	0.637	0.736	0.6865
Visit 5	30.1.08	4.2.08	0.433	0.475	0.454

Anti VRT-101 Antibody Level of Patient B.A.D, #014

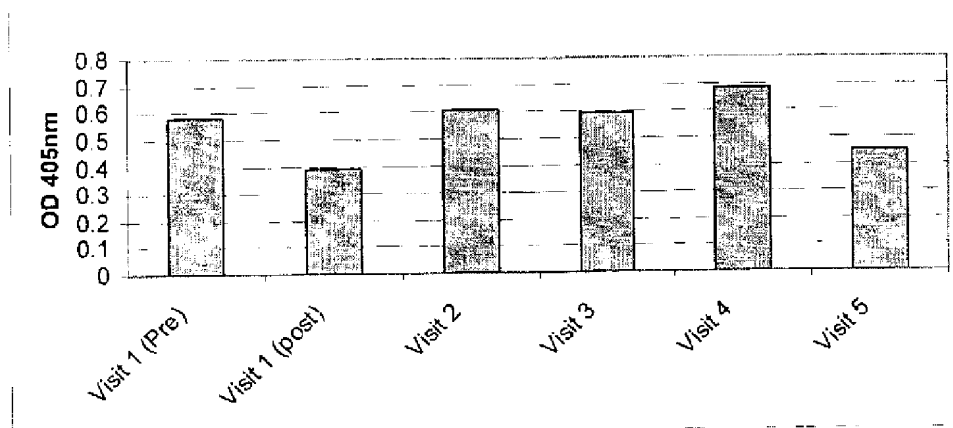


Figure 5

Patient #024

Anti- VRT - Serum

Visit #	Date Sample Received	Test Date	OD 405		Average
			Duplicate 1	Duplicate 2	
Visit 1 (Pre)	9.1.08	10.1.08	0.556	0.462	0.509
Visit 1 (post)	9.1.08	10.1.08	0.357	0.356	0.3565
Visit 2	21.1.08	27.1.08	0.61	0.6	0.605
Visit 3	29.1.08	4.2.08	0.285	0.304	0.2945
Visit 4	5.2.08	6.2.08	0.166	0.304	0.235
Visit 5	4.3.08	12.3.08	0.342	0.507	0.4245

Anti VRT-101 Antibody Level of Patient H.G.E, #024

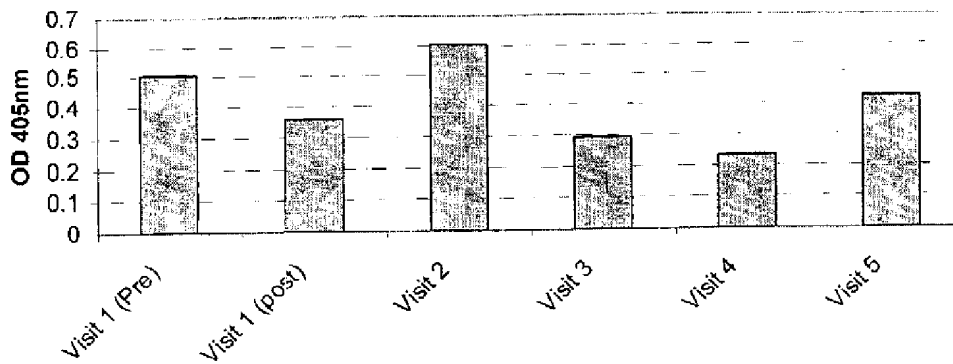


Figure 6

Patient Initial: Patient #027

Anti- VRT - Serum

Visit #	Date Sample Received	Test Date	OD 405		Average
			Duplicate 1	Duplicate 2	
Visit 1 (Pre)	27.2.08	2.3.08	0.339	0.498	0.4185
Visit 1 (post)	27.2.08	2.3.08	0.412	0.361	0.3865
Visit 2	10.3.08	12.3.08	0.405	0.443	0.424
Visit 3	17.3.08	18.3.08	0.2235	0.537	0.38025
Visit 4	26.3.08	30.4.08	0.454	0.517	0.4855
Visit 5	5.5.08	5.5.08	0.386	0.325	0.3555

Anti VRT-101 Antibody Level of Patient N.S.K, #027

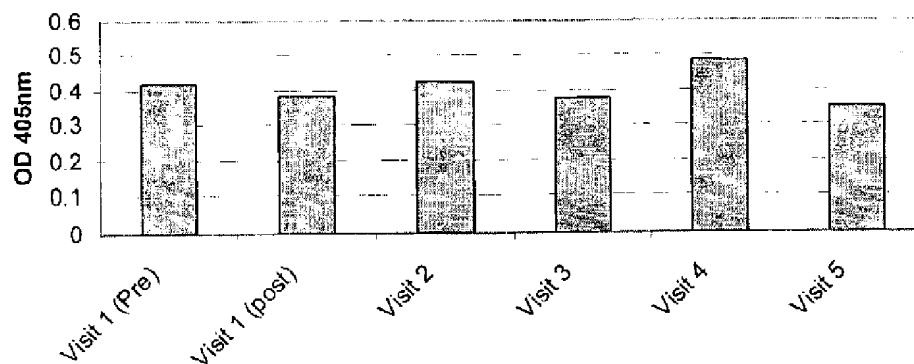


Figure 7

Patient Initial: Patient #037

Anti- VRT - Serum					
Visit #	Date Sample Received	Test Date	OD 405		Average
			Duplicate 1	Duplicate 2	
Visit 1 (Pre)	25.3.08	25.3.08	1.04	0.981	1.0105
Visit 1 (post)	25.3.08	25.3.08	0.632	0.4	0.516
Visit 2	1.4.08	1.4.08	0.39	0.455	0.4225
Visit 3	9.4.08	9.4.08	0.348	0.358	0.353
Visit 4	15.4.08	15.4.08	0.394	0.361	0.3775
Visit 5	13.5.08	22.5.08	0.276	0.309	0.292

Anti VRT-101 Antibody Level of Patient F.AA, #037

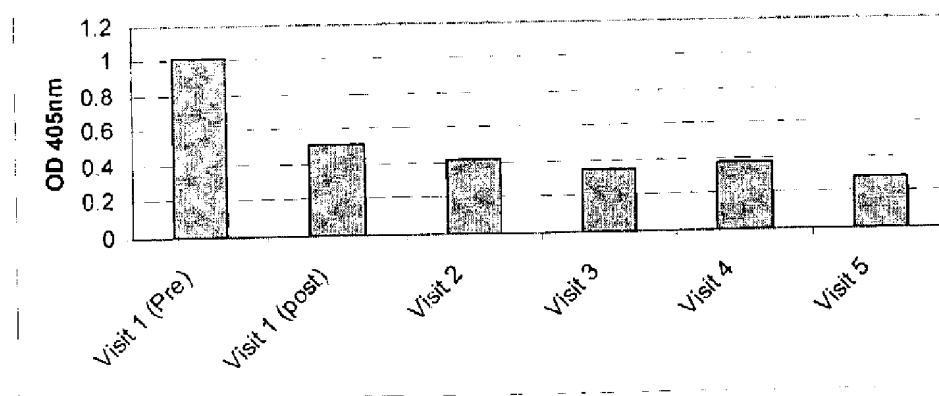


Figure 8

Patient Initial: Patient #030

Anti- VRT - Serum					
Visit #	Date Sample Received	Test Date	OD 405		Average
			Duplicate 1	Duplicate 2	
Visit 1 (Pre)	25.3.08	25.3.08	0.429	0.528	0.4785
Visit 1 (post)	25.3.08	25.3.08	0.345	0.306	0.3255
Visit 2	1.4.08	1.4.08	0.287	0.337	0.312
Visit 3	9.4.08	9.4.08	0.214	0.2	0.207
Visit 4	15.4.08	15.4.08	0.316	0.223	0.2695
Visit 5	13.5.08	22.5.08	0.218	0.214	0.216

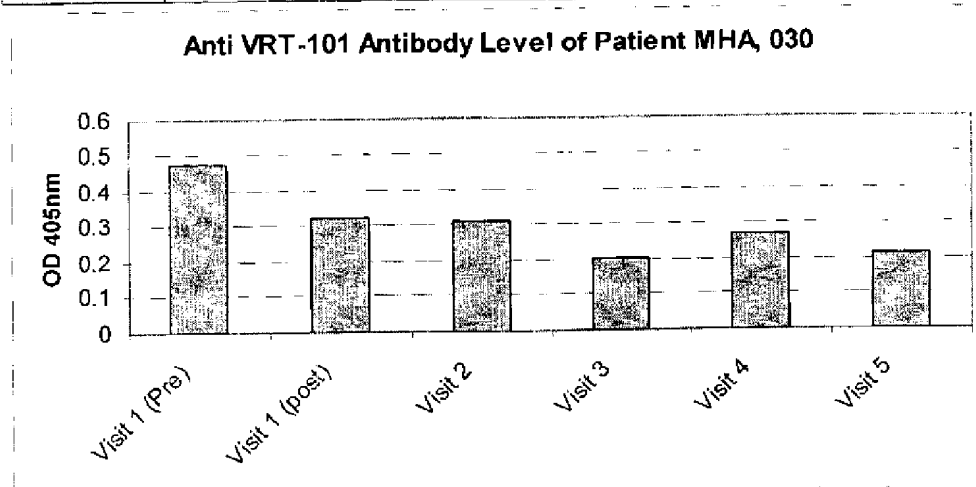


Figure 9

Patient Initial: Patient #031

Anti- VRT - Serum

Visit #	Date Sample Received	Test Date	OD 405		Average
			Duplicate 1	Duplicate 2	
Visit 1 (Pre)	26.3.08	26.3.08	0.315	0.342	0.3285
Visit 1 (post)	26.3.08	26.3.08	0.303	0.344	0.3235
Visit 2	1.4.08	1.4.08	0.235	0.321	0.278
Visit 3	9.4.08	9.4.08	0.137	0.153	0.145
Visit 4	15.4.08	15.4.08	0.207	0.198	0.2025
Visit 5	13.5.08	22.4.08	0.163	0.175	0.169

Anti VRT-101 Level of Patient WSD, 031

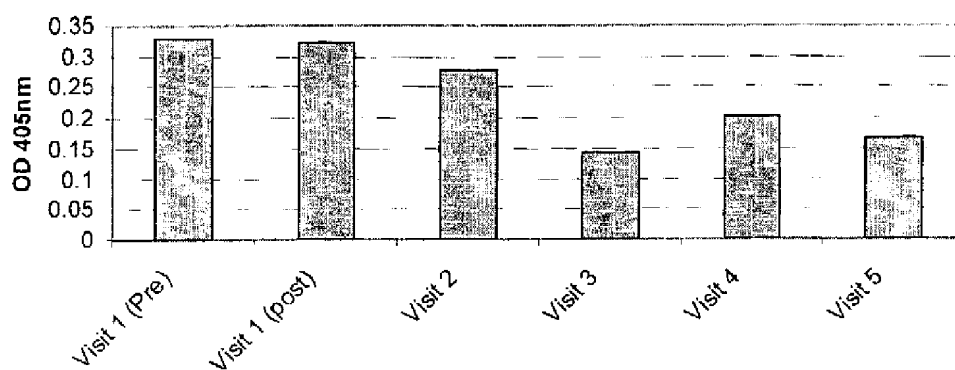


Figure 10

Patient Initial: Patient #040

Anti- VRT - Serum					
Visit #	Date Sample Received	Test Date	OD 405		Average
			Duplicate 1	Duplicate 2	
Visit 1 (Pre)	1.4.08	1.4.08	0.741	1.032	0.8865
Visit 1 (post)	1.4.08	1.4.08	0.7	0.693	0.6965
Visit 2	9.4.08	9.4.08	0.235	0.239	0.237
Visit 3	15.4.08	15.4.08	0.394	0.361	0.3775
Visit 4	5.5.08	5.5.08	0.356	0.454	0.405
Visit 5	21.5.08	28.5.08	0.472	0.539	0.506

Anti VRT-101 Antibody Level of Patient M.S.S, #040

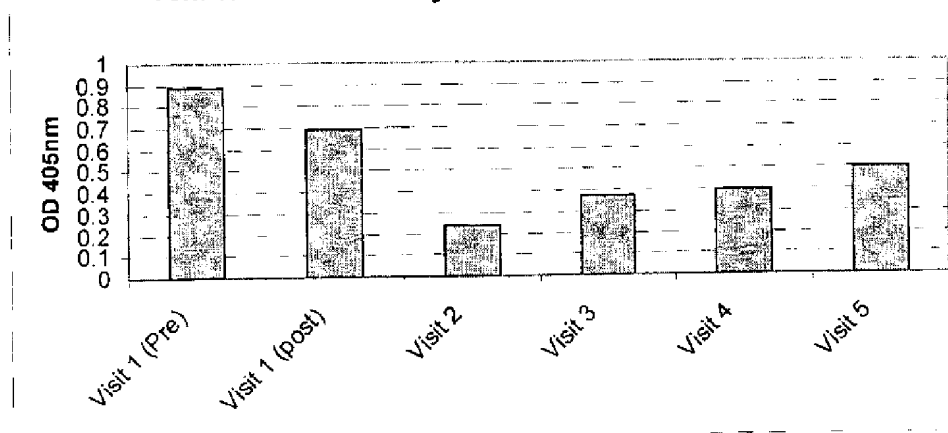


Figure 11: Anti-VRT 101 Antibody Levels After Lupusorb™ Apheresis

